

Date: Tuesday, 12/08/2008 11:26:20 AM
User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : HINGE BRACKET
Job Number : 41166
Estimate Number : 10345
P.O. Number :
This Issue : 12/08/2008 S.O. No. :
Prsht Rev. : NC Part Number : D28571
Drawing Number : D2857 REV B
First Issue : / / Type : MACHINED PARTS Project Number : N/A
Drawing Revision : B
Previous Run : 38680 Material :
Due Date : 15/09/2008 Qty: 24 Um: Each
Written By :
Checked & Approved By : JP 08.8.12
Comment : Est C 00.06.22 Removed P/O for powder coat EC
Est D 06.05.01 Added level 8 EC

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 M6061T6B2000X01250 6061-T6 Bar 2.00 x 1.25



Comment: Qty.: 0.4594 f(s)/Unit Total : 11.0250 f(s)
Material: 2.00" X 1.25"
6061-T6 (QQ-A-225/8 or QQ-A-250/11 or QQ-A-200/8)
(M6061T6B200001250)
Batch M105838

(not enough mat of this batch in computer
but had enough in the rack of
this batch #

N.A. 08/08/22

2.0 BAND SAW BAND SAW



Comment: BAND SAW
Cut blanks 5.2"

N.A. 08/08/22

3.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1
1-Machine per folio D2857-1
2-Deburr any rough edges

PTO

JP 08/08/21

(25)

4.0 QC2 INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

JP 08/08/21

(25)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: D2857-1 PAR #: NA Fault Category: Prod/Machined Parts NCR: (Yes) No DQA: D Date: 28/08/23
 QA: N/C Closed: D Date: 28/08/24

| NCR: <u>41166</u> | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|-------------------|------------|---|--|---|------------------------------|-----------------------------|--|-----------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| <u>08/08/28</u> | <u>3.0</u> | <u>origin on the 4 axis was off by .010" so multiple dimension was off. diameter of .166 was too big. R.C. operator error and choose wrong drill.</u> | | <u>SCRAP</u> | <u>JS</u> <u>08/08/28</u> | <u>S</u> <u>08/08/28</u> | | <u>S</u> <u>08/08/28</u> |
| <u>08.08.28</u> | <u>3</u> | <u>Dim 0.911 & 0.611 was 15 UNDER TOL By 0.004</u> | <u>UP</u> <u>08.08.29</u> <u>PC</u> <u>051042</u> | <u>Part OK</u> <u>SIZE OK EMAIL</u> <u>SCRAP PART</u> | <u>08.08.19</u> | <u>S</u> <u>08/08/28</u> | <u>UP</u> <u>08.08.29</u> <u>PC</u> <u>051042</u> | <u>S</u> <u>08/08/28</u> |

NOTE: Date & initial all entries

Date: Tuesday, 12/08/2008 11:26:20 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HINGE BRACKET

Job Number: 41166

Part Number: D28571

Job Number:



Seq. #: Machine Or Operation: Description :

5.0 QC8 SECOND CHECK



Comment: SECOND CHECK

51 08/02/02

6.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1
Acid etch and Alodine as per QSI 005 4.3

MS

08-09-03

(X25)

7.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

8 08/09/03 (X25)

8.0 POWDER COATING POWDER COATING



Comment: POWDER COATING
Powder Coat Gloss White (Ref. 4.3.5.1) per Dart QSI 005 4.3

M108523

START TIME: 1:15pm
OVEN TEMPERATURE: 320°F
FINISH TIME: 1:45pm

MS

08-09-10

(X25)

9.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

FZ 08/09/10

(25)

10.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock
Location: SO

8/9/11

(25)

SP

11.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/09/11

Job Completion



u 08-09-11

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

| | | |
|-----------------------------------|---------------|-----------------------------|
| DART AEROSPACE LTD | | Work Order: 41160 |
| Description: Hinge Bracket | | Part Number: D2857-1 |
| Inspection Dwg: D2857 | Rev: B | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

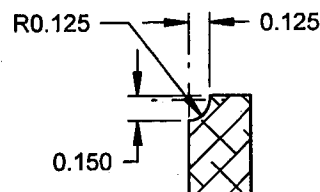
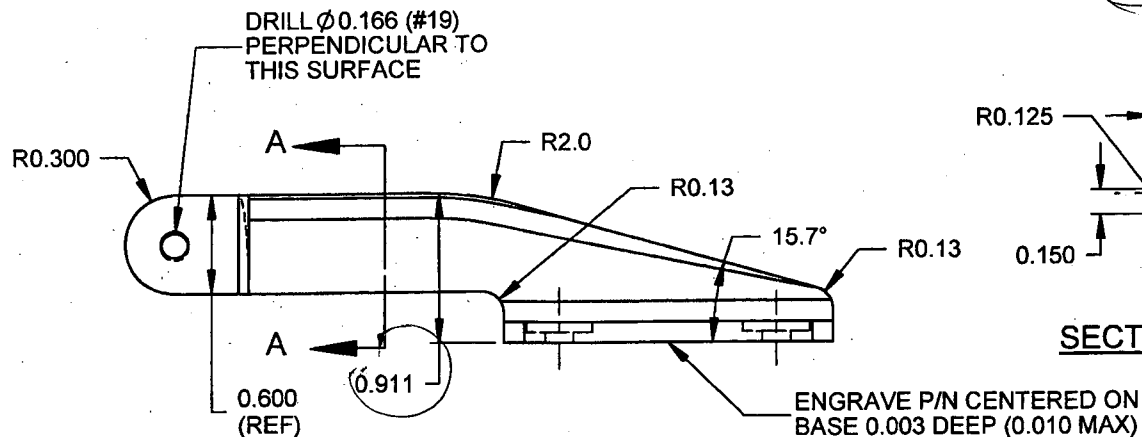
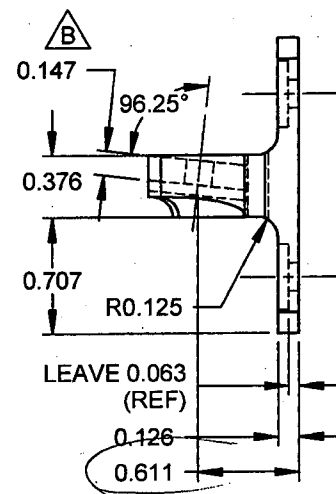
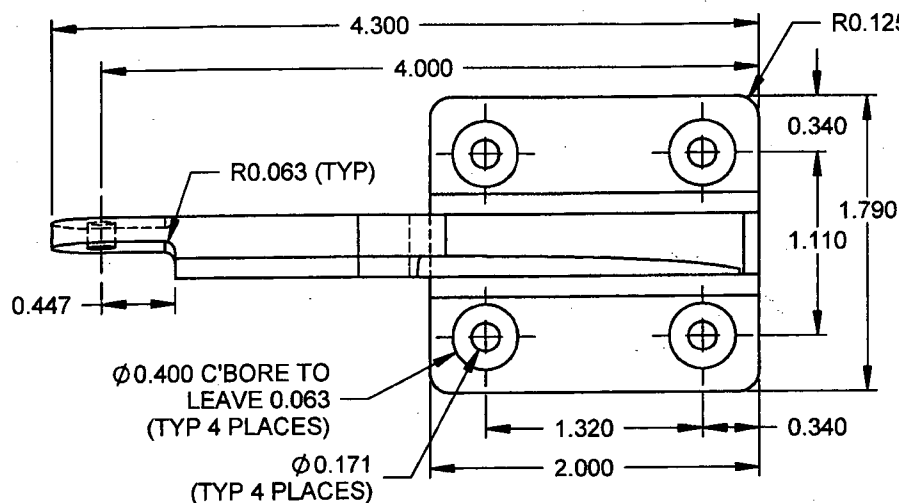
| Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|---------------|------------------|--------|--------|----------------------|----------|
| 4.300 | +/-0.010 | 4.308 | ✓ | | | |
| 4.000 | +/-0.010 | 4.001 | ✓ | | | |
| 0.340 | +/-0.010 | .341 | ✓ | | | |
| 1.110 | +/-0.005 | 1.110 | ✓ | | | |
| 1.790 | +/-0.010 | 1.792 | ✓ | | | |
| 1.320 | +/-0.005 | 1.322 | ✓ | | | |
| 2.000 | +/-0.010 | 2.008 | ✓ | | | |
| 0.340 | +/-0.010 | .341 | ✓ | | | |
| 0.447 | +/-0.010 | .448 | ✓ | | | |
| Ø0.171 | +0.005/-0.000 | .172 | ✓ | | | |
| 0.147 | +/-0.010 | .148 | ✓ | | | |
| 0.376 | +/-0.010 | .375 | ✓ | | | |
| 0.126 | +/-0.010 | .124 | ✓ | | | |
| 0.063 | +/-0.010 | .063 | ✓ | | | |
| | | | | | | |
| Ø0.166 | +0.005/-0.000 | .166 | ✓ | | | |
| 0.911 | +/-0.010 | .907 | ✓ | | | |
| 0.600 | +/-0.010 | .596 | | | | |
| | | | | | | |
| 0.125 | +/-0.010 | .126 | ✓ | | | |
| 0.150 | +/-0.010 | .150 | ✓ | | | |
| | | | | | | |

| | | | |
|--------------------------|-----------------------|----------------------------|-----|
| Measured by: S.S. | Audited by: SA | Prototype Approval: | N/A |
| Date: 08/08/08 | Date: 08/08/02 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|---------------------------------|------------|----------|
| A | 04.06.15 | New Issue | KJ/JLM | |
| B | 07.04.20 | Dimensions update per Dwg Rev B | KJ/JLM | |

DART

| | | | |
|-------------------------|--------------------------------|--|------------------------|
| DESIGN KE | DRAWN BY <i>LE</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>PH</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D2857 | REV. B SHEET 1 OF 1 |
| DATE 06.08.28 | TITLE HINGE BRACKET | | SCALE 1:1 |
| REV | DATE | DESCRIPTION | |
| A | 98.12.14 | NEW ISSUE | |
| B | 06.08.28 | ADD THICKNESS, REDRAW W/ SOLIDWORKS | |

RELEASED
06-10-13**SECTION A-A****D2857-1 HINGE BRACKET**
D2857-2 OPPOSITE

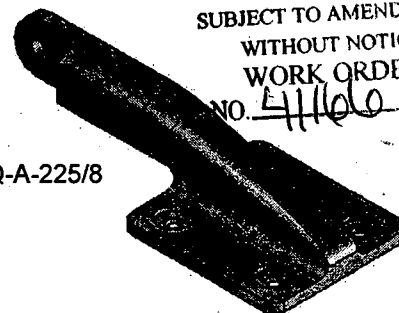
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 41160

NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM BAR PER QQ-A-250/11 OR QQ-A-200/8 OR QQ-A-225/8 (REF DART SPEC M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX

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Chris Provencal

From: David Shepherd [dshepherd@dartaero.com]
Sent: August 29, 2008 12:48 AM
To: 'Chris Provencal'
Cc: 'Mike Petsche'
Subject: RE: NCR D2857-1 Hinge Bracket

If you are convinced that the part will fit OK, then go ahead and accept the part on my behalf. I don't see a structural problem.

David

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: Thursday, August 28, 2008 11:26 AM
To: 'David Shepherd'
Cc: 'Mike Petsche'
Subject: NCR D2857-1 Hinge Bracket

David,

Qty(1) D2857-1 Hinge Bracket, the height of the arm is shifted down 0.014" (0.004" below tol). The width of the arm is to dwg so the part is the same strength. I don't think this will cause a fit problem, I think its acceptable. It's a non-landing gear part (QSI 042), what do you think?

-Chris

No virus found in this incoming message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 270.6.9/1635 - Release Date: 8/26/2008 7:29 AM

No virus found in this outgoing message.
Checked by AVG.
Version: 7.5.524 / Virus Database: 270.6.9/1635 - Release Date: 8/26/2008 7:29 AM

2008-08-29